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(74) *Attorney, Agent, or Firm*—Michael J. McGowan;  
Robert W. Gauthier; Prithvi C. Lall

(57) **ABSTRACT**

A multi-function radio frequency (RF) signal warning system detects different types of RF signals, such as radar signals, provided in various RF bands and provides an indication of the type of radar signal and the RF band. The system detects pulsed radar signals having different pulse repetition frequency (PRF) ranges as well as high duty cycle radar signals and continuous wave radar signals. The system includes a receiver processor that detects the radar signals, video amplifies the radar signals with baseline correction, and processes the radar signals to determine the type of radar signal, e.g., the RF band and PRF range. The receiver processor generates audio and visual control signals and transmits the control signals to one or more remote units. The remote units receive the audio control signals and generate an audible alarm. The remote units receive the visual control signals and illuminate one or more visual indicators, such as LEDs, that indicate the RF band of the radar signal and the PRF range of the radar signal. The remote units can also select one or more bands in which the audio alarm is enabled or disabled. One of the remote units further controls testing and calibration functions in the multi-function RF signal warning system.

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(51) **Int. Cl.**<sup>7</sup> ..... **G01S 7/40**

(52) **U.S. Cl.** ..... **342/20**; 342/13; 342/195

(58) **Field of Search** ..... 342/20, 13, 195

(56) **References Cited**

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## 25 Claims, 15 Drawing Sheets

